

Diagnosis and management of anorectal gonorrhoea in women*

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SUMMARY A retrospective assessment of 159 female patients who had undergone proctoscopy was carried out between January and September 1977. One hundred and twenty-seven (80%) were known contacts of gonorrhoea; of these, 63 (49·6%) were found to be infected with *Neisseria gonorrhoeae*. Of these, 29 (46%) harboured gonococci in the rectum as well as in the urethra and cervix while four (6·3%) harboured gonococci only in the rectum. Gram-stained smears gave positive results in only 12 of the 29 cases of rectal gonorrhoea, which indicates the importance of culturing rectal material. It is recommended that the management of anorectal gonorrhoea should be similar to that already established for urogenital infection.

Introduction

Anorectal gonorrhoea in women is an important and probably underdiagnosed disease. It rarely causes any symptoms or signs and is best detected by proctoscopy and microscopical examination and confirmed by culture. Studies during the last 10 years have shown anorectal infection in 40-63·7% of women diagnosed as having gonorrhoea. Parisier¹ reported that 40% of women with gonorrhoea had positive rectal culture results. Olsen² found positive results in rectal investigations in 63·7% of a group of 265 women who were contacts of men with gonorrhoea; in 3%, the rectal site alone gave a positive result.

Rectal investigations are not routine procedure in many clinics. Adler³ found that they were carried out on female contacts of gonorrhoea by physicians in only 20% of clinics. It is important to know which patients are at risk from anorectal gonorrhoea and consequently where resources should be directed. In these patients with anorectal gonorrhoea, adequate follow up should be undertaken.

At James Pringle House, the Middlesex Hospital, London, proctoscopy is performed on female contacts of men treated for gonorrhoea, usually at the first visit; if omitted for any reason, it is undertaken at the next visit, particularly when urethral and cervical investigations give negative

results. Patients with anorectal symptoms, or a history of anal intercourse, are also offered rectal examination. This study is a retrospective assessment by means of case records of all female patients in whom rectal investigations had been carried out during the period January to September 1977.

Patients and methods

The patients were all seen at James Pringle House, the Middlesex Hospital, London. A history was taken, including details and dates of recent sexual intercourse, contraception, and antibiotic treatment. Rectal examination was carried out with a metal proctoscope, which was introduced using a small amount of lubricating jelly. Urethral, cervical, and rectal specimens were taken with wire loops; the samples were stained by Gram's method and examined under the microscope. Specimens for culture were inoculated directly on to culture plates of a blood agar medium containing vancomycin (3 µg/ml) and colistin (8 µg/ml). The plates were put into a candle extinction jar in the clinic incubator. The full jars were transferred to the laboratory and incubated for 24 hours in candle extinction jars and then for a further 24 hours in the laboratory incubator. Plates were examined after 48 hours' incubation. Oxidase testing was carried out and oxidase-positive colonies were stained by Gram's method. Gram-negative cocci were subcultured for penicillin sensitivity and sugar fermentation tests.

Results

Proctoscopy was performed in 159 women. Of these,

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127 (80%) were contacts of confirmed cases of gonorrhoea, and 63 (49.6%) had gonococci at one or more of three sites (table I). Of these, rectal infection was found in 29 (46%) and infection of the rectum alone in four (6.3%) (table II).

TABLE I *History and symptoms of female patients having contact with confirmed cases of gonorrhoea*

Symptoms/history	No of female patients
Anorectal	2
Vaginal and abdominal	12
Anal intercourse	5
Gonococci at one or more sites	63
Total	127

TABLE II *Sites of gonococcal infection in 63 female patients*

Site	No	%
Urethra alone	2	3.2
Cervix alone	13	20.6
Urethra + cervix	19	30.2
Total	34	54
Urethra + cervix + rectum	14	22.2
Urethra + rectum	2	3.2
Cervix + rectum	9	14.3
Rectum alone	4	6.3
Total	29	46

MICROSCOPY AND CULTURE

The results of rectal investigations and the visit at which diagnosis was made are shown in table III. Seventeen (58.6%) cultures gave positive results for *Neisseria gonorrhoeae*, although the results of the Gram-stained smears were negative. In 10 cases (34.5%), the results of both Gram-stained smears and cultures were positive, and in two (7%) the results of the smears were positive but those of the cultures were negative. In the latter two patients, one culture was overgrown with *Proteus* species and the other showed no growth, although the smear was confirmed as showing typical intracellular diplococci. Culture was essential for diagnosis; in over half the confirmed cases of gonorrhoea the results of the smears were negative. In three of the four patients with gonorrhoea affecting only the

TABLE III *Results of rectal investigations*

Results		Proctoscopy		Total
Smear	Culture	At 1st visit	At 2nd visit	
+	—	1	1	2
+	+	8	2	10
—	+	10	7	17
Total		19	10	29

+ Positive — negative

rectum, diagnosis was made by culture after proctoscopy at the second visit. In each of these patients only urethral and cervical investigations had been carried out during the first visit. In the other patient with anorectal gonorrhoea alone, positive rectal results were obtained at the first visit.

OTHER INFECTIONS

Various other conditions were found during routine investigations (table IV). Trichomoniasis was the most common concurrent vaginal infection, being found in 17.2% of the patients with rectal gonorrhoea.

TABLE IV *Other conditions diagnosed*

Condition	No of women	
	With gonorrhoea (all cases)	With anorectal gonorrhoea
Trichomoniasis	11 (17.5%)	5 (17.2%)
Candidosis	3	1
Syphilis	1	
Herpes genitalis	1	

TREATMENT

The drugs used in the treatment of patients with gonorrhoea are given in table V. One patient was treated elsewhere, one defaulted before treatment could be given for a positive culture result, and six patients defaulted from follow up. The treatment was successful in all the remaining cases as confirmed by two sets of smears and cultures with negative results.

TABLE V *Drugs used in the treatment of gonorrhoea*

Drug	Dosage	No of cases
Benzylpenicillin	5 megaunits i m preceded by 1g oral probenecid	52
Co-trimoxazole	2 tablets twice daily for 4 days	7
Kanamycin	2g i m	2

NO HISTORY OF CONTACT WITH GONORRHOEA

The remaining 32 patients had no history of contact with gonorrhoea. Of these, 23 had anorectal symptoms or admitted to anal intercourse (table VI). The remaining nine requested examination to exclude sexually transmitted disease. Anorectal disease was diagnosed in two cases, both of these being anal infections due to *Candida albicans*.

Discussion

The overall incidence of positive results for gonorrhoea from rectal specimens in this series (46%)

TABLE VI Symptoms of patients with no history of contact with gonorrhoea

Symptoms	No of patients
Anorectal alone	11
Anorectal + anal intercourse	6
Anal intercourse alone	6
No anorectal + no anal intercourse	9
Anal candidosis	2

compares with that of Bhattacharyya and Jephcott⁴ (45%) and that of Schmale and others⁵ (50%).

Culture is shown to be essential in the diagnosis of rectal gonorrhoea in conjunction with microscopical examination of Gram-stained smears. Twenty-seven of the 29 specimens gave positive results by culture but only 12 by Gram-stain alone. This is probably due to the difficulty in staining and reading rectal smears.

Four patients harboured gonococci only in the rectum. If proctoscopy had not been carried out in these cases, the patients would have been considered free of infection. Only two of the 29 patients with rectal gonorrhoea had rectal symptoms and in only four proctoscopic examinations was any mucopus seen in the rectum. The patients' symptoms were anal irritation and pain on defecation.

The overall incidence of trichomoniasis (17.5%) and the similar incidence (17.2%) in patients with gonorrhoea affecting the rectum compare with an overall incidence of 19% found by Eriksson and Wanger⁶ in their study on infections concurrent with gonorrhoea. How infection reaches the rectum in these patients who deny anorectal contact is still uncertain, but it seems reasonable that patients with the profuse watery vaginal discharge associated with trichomonal infection are at greater risk of urogenital gonorrhoea spreading to the rectum, as suggested by King.⁷

In this clinic, patients with urogenital gonorrhoea are discharged after treatment, if the results of two

sets of smears and cultures are negative; the same procedure is followed when anorectal gonorrhoea is diagnosed. However, if rectal investigations are not carried out before treatment is given, no diagnosis of rectal gonorrhoea can be made and it is therefore impossible to make an informed decision on how many follow-up investigations are required.

This study shows that anorectal gonorrhoea is an important aspect of the disease and is present in a growing number of cases. Investigations after treatment are considered to be an essential part of the management of urogenital gonorrhoea. Anorectal gonorrhoea should be managed similarly; the disease may be excluded after two proctoscopic examinations and a cure considered when two negative results have been obtained. It is recommended that diagnostic proctoscopy be carried out in all women with gonorrhoea and in those who are contacts of patients with gonorrhoea. Management should then be the same as that for urogenital disease.

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